



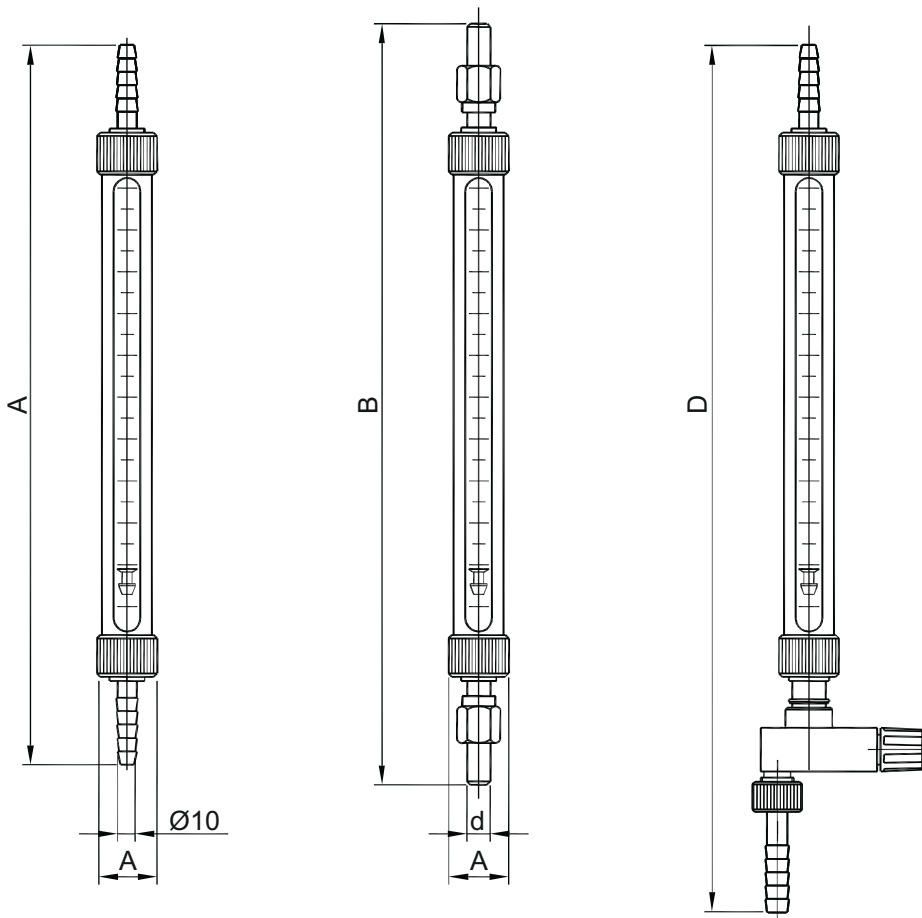
## ROTAMETER RUN TYPE

The rotameters RUN are used to measurement of volume fluxes or mass fluxes of gases and liquids in laboratorial, experimental and industrial installations.

### EXEMPLARY MEASURING RANGES

Type	Air dm <sup>3</sup> /h 293 K, 0,1013 MPa		Water dm <sup>3</sup> /h 293 K, 0,1013 MPa		Permissible conditions		
	min	max	min	max	temperature, K	pressure, MPa	
						liquide	gas
RUN-06	1	10	1,6	16	363	0,6	0,4
	2	20	2	20			
	3	30	2,5	25			
	7	70	3,15	31,5			
	10	100	4	40			
	14	140					
	18	180					
	22	220					
	30	300					
	40	400					
	50	500					
	60	600					
80	800						
100	1000						
RUN-10	100	1000	4	40	363	0,6	0,4
	120	1200	5	50			
	160	1600	6,3	63			
	200	2000	8	80			
	250	2500	10	100			
RUN-16 B	125	1250	5	50	363	0,6	0,4
	160	1600	6,3	63			
	200	2000	8	80			
	250	2500	10	100			
	315	3150	12,5	125			
RUN-16	200	2000	8	80	363	0,6	0,4
	250	2500	10	100			
	315	3150	12,5	125			
	400	4000	16	160			
	500	5000	20	200			

On demand it is possible to fit the measuring range to individual needs of customer.



### The main dimensions in mm

Type	A	B	C	D	d	mass, kg
RUN – 06	ø 24	403	413	486	8	0,4
RUN – 10	ø 36	418	452	501	14	0,7
RUN – 16	ø 48	433	461	515	14	1,6

There are many types of executions:

- A** – connection on hose
- B** – connection to welding
- C** – rotameter with control valve
- ZA** - control valve of aluminium alloy
- ZK** – control valve of acidproof steel
- ZM** – control valve of brass in case of connections B
- WS** – connection on hose - made of acidproof steel
- WA** – connection on hose – made of aluminium alloy
- SP** – sectional joints with ending to welding with pipeline

### CONSTRUCTION MATERIALS

**Basic elements of rotameters:** glass pipe and float.

**Material of pipe:** glass (alloy of boron and silicon) in sort simax or termisil.

**Float's material:** alloy of Al, chromium-nickel steel sort 1H18N9T, tarflen, PCV.

**Seal of glass pipe:** rings for suitable factor.

Connections, including hose ends, may be manufactured from the same material than floats.

## ACCURACY OF READING

The standard accuracy class is 2,5 according with PN-85/M-42371.

On demand there is possible to execute the rotameter in higher accuracy class with calibration certificate from our laboratory, Weights and Measures Office or from Accredited Laboratory.

## INSTALLATION DIRECTIONS

- 1) The rotameter should be install in vertical position. The permissible deviation: 1.
- 2) In all types of rotameters the most profitable is ( in case of industrial rotameters it is necessary ) shunt of rotameters (fig.1). It makes possible to exchange rotameter without the interruption in technological process. The detour valve in closed condition must be completely tight.
- 3) The rotameter's stresses and vibrations are not allowed. In industrial constructions it is necessary ( in front of and behind of rotameter ) to join the pipeline with supporting structure and installing the elastic parts in adjoining segments.
- 4) For rotameter reading we used the biggest dimension of float. Very often it is the upper edge of float. In reading time the float has to assume a steady position without vertical oscillation. The flux of fluid can not contains the gas bubbles.
- 5) Pollutants which flows through the rotameter creating the sediments on measuring elements so it is necessary disassemble the rotameter and flush it by dissolving substances. If the user is not able to clean up the rotameter there is possible to clean the rotameter by producent. The sediments in rotameter causes falsility measurements.
- 6) The strong blows of floats by buffer can cause breakage of glass pipe. We can avoid this situation by installing additional cut-off valve (fig.2). In periods, in which occur strong changes of flux the cut-off valve should be open. After fixing of flux the cut-off valve has to be closed and the rotameter indication should be read.
- 7) The rotameter which works in higher temperature should be protected against sudden cooling down for example treated by cold water.

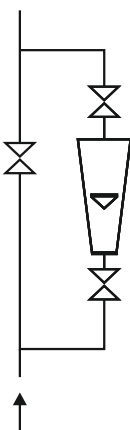


fig. 1

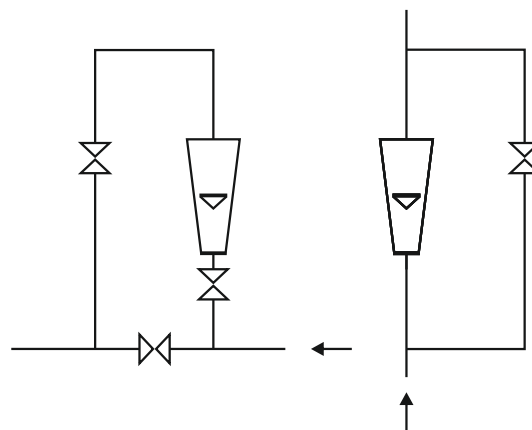


fig. 1